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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,950	04/10/2006	Norio Nakatani	4731-0128PUS1	3089
2292 7590 12/06/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER PATEL, PUNAM	
			ART UNIT 2855	PAPER NUMBER
			NOTIFICATION DATE 12/06/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/569,950

Applicant(s)

NAKATANI, NORIO

Examiner

Punam Patel

Art Unit.

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 3, and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/21/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: The phrase "the lead pin" in line 12 will be read as "a single lead pin of the plurality of lead pins" in order to correct antecedent basis.

Claims 4, 6, and 7 are objected to because of the following informalities: The phrase "the plural lead pins" in line 2 will be read as "the plurality of lead pins" in order to be consistent with language of the independent claim.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 6, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to what is meant by the phrase "fixing the plural lead pins at places aligned with **the** lead pins." For the purposes of examination, the phrase is best interpreted to mean that the plurality of lead pins are aligned with each other in a spaced relation (see Applicant's Fig. 5 for support of this interpretation).

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 4, and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7,308,833 in view of Applicant's Admitted Prior Art. US 7,308,833 claims the wire harness for connecting the lead pins of an electrical power steering assembly with a control board, however does not specifically disclose the steering assembly comprising two shafts connected by a torsion bar. AAPA teaches that a conventional steering system comprises: a steering shaft including an input shaft and an output shaft which are coaxially interconnected via a torsion bar; a cylindrical housing for rotatably supporting the steering shaft; a detector coil accommodated in the housing as surrounding the steering shaft in order to detect a torsion angle of the torsion bar; an electric motor for applying a steering assist force to the output shaft or a steering mechanism operatively

Art Unit: 2855

coupled with the output shaft; a control board for controlling the steering assist force from the electric motor based on the variations of impedance produced in the detector coil; and a plurality of lead pins projecting from an outside periphery of the detector coil (Specification, ¶ 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the wire harness in an electrical steering system with two shafts connected by a torsion bar, since those are components of conventional and notoriously well known electrical steering systems.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Muta (US 5,586,901).**

Art Unit: 2855

With respect to Claims 1, 2, 4, and 6, AAPA teaches a Conventional electric power steering system comprising: a steering shaft including an input shaft and an output shaft which are coaxially interconnected via a torsion bar; a cylindrical housing for rotatably supporting the steering shaft; a detector coil accommodated in the housing as surrounding the steering shaft in order to detect a torsion angle of the torsion bar; an electric motor for applying a steering assist force to the output shaft or a steering mechanism operatively coupled with the output shaft; a control board for controlling the steering assist force from the electric motor based on the variations of impedance produced in the detector coil; and a plurality of lead pins projecting from an outside periphery of the detector coil (Specification, ¶ 2). However AAPA, fails to disclose a wire harness for interconnecting the lead pins and the lead wire of a control board.

Muta teaches a wire harness for interconnecting lead pins a lead wire (Fig. 6 and col. 2, lines 20-27), wherein the wire harness comprises housing (#31, wherein the housing is read as the coupler) with a plurality of conductive sleeve terminals, each terminal comprising a cylindrical sleeve portion (#43) fitted about the lead pin (#22) and a connection portion (#35) connected with the lead wires of the wire harness and upstanding from an outside periphery of the sleeve portion. Muta Fig. 6 is compared with Applicant's Fig. 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the power steering assembly of AAPA to comprise a wire harness for interconnecting the leads and control board, as taught by Muta, in order to provide an electrical connection means that does not require precise alignment and thus results in reduced manufacturing costs (Muta, col.1, lines 50-61).

*Allowable Subject Matter*

Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art made of record fails to teach the wire harness wherein the sleeves holding the lead pins comprise an inwardly bent portion on the side of the sleeve.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2003227767 teaches a similar wire harness for an electric power steering system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Punam Patel whose telephone number is (571) 272-6794. The examiner can normally be reached on Monday to Friday 9:30 AM to 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2855

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

11/28/2007

  
**EDWARD LEEKOWITZ**  
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